

## PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 10 January 2001 (10.01.01)	
International application No. PCT/NL00/00283	Applicant's or agent's file reference T/WR51/SGK/2p
International filing date (day/month/year) 01 May 2000 (01.05.00)	Priority date (day/month/year) 29 April 1999 (29.04.99)
Applicant NEDERHOED, Reinder, Eric	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

29 November 2000 (29.11.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Jean-Marc Vivet Telephone No.: (41-22) 338.83.38
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## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup> : <b>H04L 12/56</b>	<b>A1</b>	(11) International Publication Number: <b>WO 00/67434</b> (43) International Publication Date: 9 November 2000 (09.11.00)
(21) International Application Number: <b>PCT/NL00/00283</b> (22) International Filing Date: 1 May 2000 (01.05.00) (30) Priority Data: 1011946                      29 April 1999 (29.04.99)                      NL 1013444                      1 November 1999 (01.11.99)                      NL (71)(72) Applicant and inventor: <b>NEDERHOED, Reinder, Eric</b> (NL/NL); Koevondermeersstraat 1, NL-8531 RP Lemmer (NL). (74) Agent: <b>T JONG, Bastiaan, Jacobus; Swedlinckplein 1,</b> <b>NL-2517 GK The Hague (NL).</b>	(81) Designated States: AE, AI, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report</i>	
(54) Title: <b>RADIOGRAPHIC NETWORK</b>		
(57) Abstract  Device for transferring information, comprising a number of node elements which each have their own address and are provided with a central processor unit having coupled thereto a radio receiver, a radio transmitter and an input/output member, wherein the central processor unit is programmed such that it passes a data signal received by the radio receiver to the radio transmitter when an address associated with the data signal differs from the address of the node element.		

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10/031642

531 Rec'd PCT/PT 29 OCT 2001

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# RADIOGRAPHIC NETWORK

The invention relates to a device for transferring information which comprises a number of node elements. Such a device can be designated a network.

Each of the node elements has its own address so that information intended for that node element and information originating from that node element can be identified as being associated with that node element.

Networks, particularly those used for transferring digital information between computers, are generally known. These typically comprise direct line connections and/or switched line connections over which the information is transferred. The information is sent along the line connections in accordance with a specified protocol so that each of the node elements can make use of the information.

The laying of line connections is generally quite a costly business, particularly when these line connections have to be arranged between separate buildings. The line connections must then generally be buried in the ground.

This drawback is obviated in the device according to the invention as characterized in claim 1. This network according to the invention operates radiographically so that physical connections between the node elements are not necessary. A data signal is transferred from the one node element to another until the node element is reached for which the data signal is intended.

A further favourable development is characterized in claim 2. This prevents a data signal creating repetitive feedback in the device, whereby proper operation and rapid data transfer could be adversely affected. The data signal will spread through the

network like the rings resulting from a stone in water and be "quenched" at the edges of the network.

The device can be embodied such that a data signal is transmitted a number of times at intervals in order to ensure that it arrives at the intended destination. The measure of claim 4 is preferably applied herein. As soon as the node element from which the data signal originally comes receives the confirmation signal, repeated transmission of the original data signal can be stopped.

The original data signal sent by a node element is generated in the embodiment according to claim 5 by a data-generating device connected to the input/output member. The data-generating device thus provides the data which must be transferred to another location in the network. Using the radio transmitter the central processor unit then sends the data which is packaged in a particular protocol.

A node element can also comprise a data-processing device and data supplied via the network is then further processed by this data-processing unit.

The measure of claim 7 is preferably applied. The signal is hereby prevented from being able to run on, for instance as a consequence of a malfunction of one of the radio receivers.

The device according to the invention can be applied for mutual connection of a number of computers. A number of node elements can herein be applied which are used solely to pass on the data signal from one computer to another, particularly when the distance between the computers for mutual connection is greater than the range of any of the radio transmitters.

The radio receivers and radio transmitters suitably operate at a frequency and with a power such that no authorization is required therefor. A suitable frequency is therefore 433 MHz.

Instead of mutually connecting a number of computers, the network according to the invention can also be used in suitable manner to control the systems present in the vicinity from a central point at which a  
5 computer is arranged. These can be for instance indicator and alarm systems in factories and for instance homes for the elderly and nursing homes and culture systems in agriculture and horticulture.

Another suitable application is the control of  
10 systems in buildings, such as heating installations, lighting and the like. The device is applied particularly usefully here when these buildings are separate buildings such as for instance in bungalow parks. In this respect an application in glass  
15 horticulture can also be envisaged.

Another suitable application is as theft alarm system, wherein a number of individual objects have to be monitored. Yachts in a marina, transport containers at a storage depot and the like can be envisaged here.  
20 Each of the objects for monitoring, such as the yachts or the containers, is provided with a node element according to the invention, on the input/output member of which one or more alarm sensors are connected. The device can be embodied herein such that each of the node  
25 elements is periodically checked for proper operation in order to enable timely recognition of sabotage.

In systems wherein the device is used to control or monitor a number of separate buildings and/or objects, the central computer can also be used in mobile manner.  
30 As long as it is situated within the range of the radio transmitter of one or more of the node elements, data signals intended for this central computer and originating from this central computer will be processed correctly in the network. In the stated application for  
35 bungalow parks, the device can for instance be applied to monitor and control the installations in each of the bungalows. It is thus possible to monitor the proper

operation of the central heating devices in each of the bungalows, but also to remotely switch them on and off and adjust the thermostat thereof. When the bungalow is not occupied, the thermostat can for instance be set  
5 remotely to a position at which freezing of pipes is prevented. It is also possible to set the thermostat to a comfortable value some time before the arrival of new guests, so that they arrive to find a pleasantly heated bungalow.

10 Mains power failure can for instance be detected in similar manner. Only one node element need generally be applied per bungalow. All desired information signals and controls can be performed via this node element.

The bungalows in a bungalow park are usually spaced  
15 such that it is possible to suffice with one node element per bungalow to ensure a good transmission through the network. In the case of greater distances additional node elements can be incorporated.

Another example of the present invention is the  
20 application in climate control in glass horticulture.

Within glass horticulture a system can be developed wherein, on the basis of diverse sensors (about 50 per hectare) in the glasshouse, a picture can be formed of the climatological situation in this glasshouse, such as  
25 determining the temperature, relative humidity, CO<sub>2</sub> and so on.

For a uniform growth of the crop it is particularly important to provide a very uniform climate through the glasshouse.

30 According to the invention the differences can be detected and corrected with a network of sensors over the whole area of the glasshouse. Sunblinds, heating equipment and sprinkler installations are for instance actuated subject to the detected differences.

35 The pattern of sensors can be sub-divided into sub-patterns which each co-act with a node element in accordance with the network system of the invention. It

is further possible to group the sensors of the same type, for instance temperature, humidity and CO<sub>2</sub> sensors, which groups report to predetermined node elements, which data is transferred to the relevant computer.

5       The system according to the invention can be extended still further by applying remote mobile control elements or hand terminals which are carried by security or glasshouse personnel, which personnel can immediately report information relating to humidity or plant  
10 diseases. In this latter case the member of staff does not need to know his location in the glasshouse at that moment. The position determination can in any case take place with for instance the bar codes on the plants in order to obtain a more precise determination. A less  
15 precise position determination takes place as "cross-check", i.e. use is made of the high-frequency signal intensity generated by the hand terminal. This operates as follows:

When the signal from the hand terminal is received  
20 by a plurality of node elements, it is possible on the basis of the signal intensity to roughly determine the location at which the hand terminal is situated. The disease symptoms and the associated position  
determination reported by the hand terminal herein serve  
25 as reference data, for instance for a spraying machine for pesticides.

Other functions can be given to the hand terminals, for instance a timestamp, so that the activities performed by staff can be registered.

30       The manner in which the different sensors and control elements are connected to the input/output member of the node element and co-act therewith will be obvious to a skilled person in the field and requires no further explanation here.

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## CLAIMS

1. Device for transferring information, comprising a number of node elements which each have their own address and are provided with a central processor unit having coupled thereto a radio receiver, a radio transmitter and an input/output member, wherein the central processor unit is programmed such that it passes a data signal received by the radio receiver to the radio transmitter when an address associated with the data signal differs from the address of the node element.
2. Device as claimed in claim 1, wherein the processor unit comprises a memory for temporary storage of the data signal and is further programmed such that it compares a received data signal with the stored data signal and, if they are identical, does not pass the received data signal for a determined time to the radio transmitter.
3. Device as claimed in claim 1 or 2, wherein the central processor unit is programmed such that it passes a data signal received by the radio receiver to the input/output member when an address associated with the data signal corresponds with the address of the node element.
4. Device as claimed in claim 3, wherein the central processor unit is programmed such that it generates a confirmation signal and passes it to the radio transmitter when an address associated with a received data signal corresponds with the address of the node element.
5. Device as claimed in any of the foregoing claims, wherein at least one data-generating device is connected to the input/output member and the central processor unit is programmed such that in accordance with a determined protocol it addresses and formats data

received via the input/output member of the data-generating device and passes it to the radio transmitter.

5       6. Device as claimed in claim 3, wherein at least one data-processing device is connected to the input/output member and the central processor unit is programmed such it deduces data from a data signal received from the radio receiver and passes it to the data-processing device.

10       7. Device as claimed in any of the foregoing claims, wherein the radio receivers of at least two other node elements are arranged within the range of each radio transmitter of a node element.

15       8. Device as claimed in any of the foregoing claims, wherein a control device such as a computer is connected to the input/output member.

20       9. Application of the device according to the invention as claimed in any of the foregoing claims in horticulture, in particular glass horticulture, wherein an area for monitoring is provided with a pattern of sensors.

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## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/NL 00/00283

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H04L12/56

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L A01G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 851 632 A (LUCENT TECHNOLOGIES INC) 1 July 1998 (1998-07-01) column 1, line 29 - column 3, line 9 column 4, line 40 - column 5, line 48 column 8, line 40 - line 50 column 9, line 20 - line 26	1,3-6,8
Y		9
Y	WO 95 16341 A (WAIPUNA INT LTD ; TINDALL DENNIS WALTER (NZ)) 22 June 1995 (1995-06-22) page 1, line 11 - line 29 page 7, line 19 - page 8, line 20 --- -/-	9

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) of which is cited to establish the publication date of another claim or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

\*Z\* document member of the same patent family

Date of the actual completion of the international search

15 August 2000

Date of mailing of the international search report

22/08/2000

Name and mailing address of the ISA

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Brichau, G

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/NL 00/00283

## C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 610 595 A (GARRABRANT GARY W ET AL) 11 March 1997 (1997-03-11) column 1, line 59 -column 2, line 65 column 4, line 30 - line 62 column 7, line 24 -column 8, line 41	1,2,7
A	DE 42 24 422 A (SEL ALCATEL AG) 27 January 1994 (1994-01-27) column 2, line 28 - line 35 column 4, line 55 -column 5, line 21	7

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

PCT/NL 00/00283

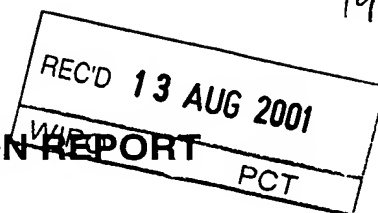
Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0851632	A	01-07-1998	US 5898679 A JP 10215281 A	27-04-1999 11-08-1998
WO 9516341	A	22-06-1995	AU 1205195 A	03-07-1995
US 5610595	A	11-03-1997	NONE	
DE 4224422	A	27-01-1994	NONE	

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference T/WR51/SGK/2p	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/NL00/00283	International filing date (day/month/year) 01/05/2000	Priority date (day/month/year) 29/04/1999
International Patent Classification (IPC) or national classification and IPC H04L12/56		
Applicant NEDERHOED, REINDER ERIC		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 7 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 1 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  29/11/2000	Date of completion of this report  07.08.2001
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Jimenez Hernandez, P  Telephone No. +49 89 2399 7938



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/NL00/00283

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

**Description, pages:**

1-5 as originally filed

**Claims, No.:**

2-9 as originally filed

1 as received on 20/07/2001 with letter of 20/07/2001

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/NL00/00283

5. ☒ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

**see separate sheet**

6. Additional observations, if necessary:

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Yes:	Claims	2,3,4,7,9
	No:	Claims	1,5,6,8
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-9
Industrial applicability (IA)	Yes:	Claims	1-9
	No:	Claims	

### 2. Citations and explanations

**see separate sheet**

## VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

**see separate sheet**

## VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**



**Re Item I**

No basis for the term "*functions autonomously*" can be found in the application documents as originally filed. The amendment filed by the applicant with letter dated 20.07.2001 therefore contravenes Article 19(2) PCT. See also the comments under Item VIII, Point 1.

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

The following document not cited by the international search report is herewith introduced:

**D1 = "Soldier Phone: an innovative approach to wireless multimedia communications", Military Communications Conference, 1998. MILCOM 98. Proceedings, IEEE, pages 903-907 vol. 3**

1. The subject-matter of independent claim 1 is not novel, Art. 33 (1) and (2) PCT.

1.1 Claim 1 relates to a wireless network.

**D1**, which relates to the same area of wireless networking as the application, is considered as the closest prior art.

**D1**, in the terminology of claim 1, discloses a device for transferring information, comprising a number of node elements (page 903, right-hand column, last paragraph and Fig. 3). Each node element has its own address (page 905, right-hand column, last paragraph and Fig. 4) and is provided with a central processor unit having coupled thereto a radio receiver, a radio transmitter and an input/output member (Fig. 5), wherein the central processor unit is programmed such that it passes a data signal received by the radio receiver to the radio transmitter when an address associated with the data signal differs from the address of the node element (page 903, right-hand column, last two lines and page 905, left-hand column, lines 8-13).

**D1** therefore discloses all the features of claim 1.

If novelty should be disputed based on some minor difference of interpretation, it is pointed out that the subject-matter of claim 1 would in any case not involve an inventive step (Article 33(3) PCT), given that **D1** attempts to solve the same problem and describes the same type of solution as presently claimed in claim 1.

2. The subject-matter of independent claim 9 does not involve an inventive step and claim 9 therefore does not meet the requirements of Art. 33(1) and (3) PCT.

- 2.1 Claim 9 claims the application of the wireless network device as disclosed in claim 1 in the field of horticulture, i.e. for networking a pattern of sensors in glass horticulture.

The use of wireless communications for such arrangements is known by the skilled person in the field of horticulture (see eg **D2 = WO 95 16341 A (WAIPUNA INT LTD ;TINDALL DENNIS WALTER (NZ)) 22 June 1995 (1995-06-22, page 7, lines 29-30 and page 8, lines 12-13)**). Thus, faced with the problem of optimally networking a pattern of sensors in a certain horticulture application, the person skilled in the art would consult the area of wireless communications and come across **D1**. The skilled person would apply the teachings of said document to the field of horticulture arriving at the subject-matter of claim 9, since the applicability of said teachings in a wide range of commercial applications not excluding horticulture is disclosed (page 903, left-hand column, lines 1-8).

3. The additional features of the dependent claims do not add anything novel and inventive to the independent claims.

- 3.1 The additional features of the following dependent claims add no novel subject-matter to claim 1, said features being already disclosed in **D1** (Art. 33(2) PCT):

-Claims 5, 6, 8: see **D1**, page 904, left-hand column, lines 2-7 from the bottom.

- 3.2 The additional features of the remaining dependent claims are either common measures or variations (claims 2, 3) or already known features (claims 4, 7) and therefore add nothing of inventive significance to claim 1 (Art. 33(3) PCT):

-Claim 4: see **D3 = EP-A-0 851 632 (LUCENT TECHNOLOGIES INC) 1 July 1998 (1998-07-01)**, column 2, last paragraph and column 3, first paragraph.

-Claims 7: see **D4 = US-A-5 610 595 (GARRABRANT GARY W ET AL) 11 March 1997 (1997-03-11)**, Fig. 5.

**Re Item VII**

**Certain defects in the international application**

1. The independent claims are not in the two-part form vis-à-vis **D1** Rule 6.3(b) PCT.
2. **D1** is not mentioned in the description, Rule 5.1(a)(ii) PCT.

**Re Item VIII**

**Certain observations on the international application**

1. The amendment in claim 1 filed by the applicant with letter dated 20.07.2001 could not be accepted and therefore has not been taken into consideration due to the following reasons:
  - 1.1 The amended claim 1 only adds to the original claim 1 that the central processor unit is programmed so that it **functions autonomously** (amended claim 1, line 6). The exact meaning of this added feature and the way in which it limits the original scope of protection is unclear (Art. 6 PCT).
  - 1.2 The applicant explains in his letter that with the amended claim "*it is made clear that the device according to the invention functions without any information about other devices of the same kind*". This however cannot be derived from the wording of the amended claim 1.
  - 1.3 Furthermore, by interpreting said new feature as the applicant suggests, the subject-matter of the amended claim 1 goes beyond the disclosure in the

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/NL00/00283

international application as filed (Art. 19 (2) PCT), there being no basis in the description for such an interpretation.

This interpretation also causes the description to contravene Art. 5 PCT due to insufficient disclosure of the invention, since the description does not disclose any information regarding the medium access scheme used by the claimed devices when they act as relaying stations with no information about other devices. This disclosure is however essential for the skilled person in order to be able to carry out the claimed invention, eg how to avoid or deal with collisions when several autonomous relay stations transmit a packet at the same time, etc. Moreover, either the present formulation or a claim 1 amended to include the wording "*wherein the device functions without any information about other devices of the same kind*" would not be acceptable for the further reason that it defines a result to be achieved (Art. 6 PCT).

2. Claim 9 claims the application of the wireless network device as defined in claim 1 in the field of horticulture, wherein an area for monitoring is provided with a pattern of sensors. The way in which the wireless network device defined in claim 1 should be applied to this horticultural environment is not defined, thus rendering the scope of protection conferred by claim 9 unclear (Art. 6 PCT).

1

EPO 2001

26.07.2001

PCT/NL00/00283  
Enclosure to letter  
dated 20-7-2001

(100)

## AMENDED CLAIM

1. Device for transferring information, comprising a  
number of node elements which each have their own address  
and are provided with a central processor unit having  
coupled thereto a radio receiver, a radio transmitter and  
5 an input/output member, wherein the central processor  
unit is programmed such that it autonomously functions  
and passes a data signal received by the radio receiver  
to the radio transmitter when an address associated with  
the data signal differs from the address of the node  
10 element.

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>T/WR51/SGK/2p</b>	<b>FOR FURTHER ACTION</b> <small>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</small>	
International application No. <b>PCT/NL 00/ 00283</b>	International filing date (day/month/year) <b>01/05/2000</b>	(Earliest) Priority Date (day/month/year) <b>29/04/1999</b>
Applicant  <b>NEDERHOED, REINDER ERIC</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of Invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ **None of the figures.**

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/NL 00/00283

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04L12/56

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L A01G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 851 632 A (LUCENT TECHNOLOGIES INC) 1 July 1998 (1998-07-01) column 1, line 29 -column 3, line 9 column 4, line 40 -column 5, line 48 column 8, line 40 - line 50 column 9, line 20 - line 26	1,3-6,8
Y	---	9
Y	WO 95 16341 A (WAIPUNA INT LTD ;TINDALL DENNIS WALTER (NZ)) 22 June 1995 (1995-06-22) page 1, line 11 - line 29 page 7, line 19 -page 8, line 20 ---	9
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
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- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

15 August 2000

Date of mailing of the international search report

22/08/2000

Name and mailing address of the ISA

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Authorized officer

Brichau, G

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/NL 00/00283

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 610 595 A (GARRABRANT GARY W ET AL) 11 March 1997 (1997-03-11) column 1, line 59 -column 2, line 65 column 4, line 30 - line 62 column 7, line 24 -column 8, line 41 ----	1,2,7
A	DE 42 24 422 A (SEL ALCATEL AG) 27 January 1994 (1994-01-27) column 2, line 28 - line 35 column 4, line 55 -column 5, line 21 -----	7



**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

PCT/NL 00/00283

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 0851632	A	01-07-1998	US	5898679 A	27-04-1999
			JP	10215281 A	11-08-1998
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WO 9516341	A	22-06-1995	AU	1205195 A	03-07-1995
-----					
US 5610595	A	11-03-1997	NONE		
-----					
DE 4224422	A	27-01-1994	NONE		
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